

**Notice of Allowability**

Application No.

10/627,992

Applicant(s)

FRIE ET AL.

Examiner

Art Unit

Demetrius R. Pretlow

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed June 2, 2005.
2. ☒ The allowed claim(s) is/are 1-13 and 15.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                     | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

## DETAILED ACTION

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin Spivak on August 16, 2005.

The application has been amended as follows:

In claim 1, line 9, before "ratio" change "the" to – a-- .

In claim 15, line 13, before "ratio" change "the" to – a-- .

### ***Allowable Subject Matter***

Claims 1-13, and 15 are allowed.

The best prior art of record particular, Sultan (US 5,629,481) teach a mass air flow measurement system comprising a sensing device located in an air flow providing an output signal relational to amount of mass air flow past the device. However Sultan does not teach the following combination of claim limitations.

The primary reason for the allowance of claims 1-13 is the inclusion of the combination of method steps in particular the method steps of subjecting a time series of signals, which comprises several signals which have been captured, to a vibration analysis, which determines a fundamental vibration and at least one prescribed

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harmonic vibration of the fundamental vibration and compares parameters of the fundamental vibration and the prescribed harmonic vibration; and establishing a backflow against the average mass air- flow, due to pulsations, when the ratio of the parameters of the harmonic vibration to the fundamental vibration exceeds a prescribed threshold value. It is this steps found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 15 is the inclusion of the limitations of an combination of claim limitations in particular the limitations of wherein the mass airflow sensor unit captures signals, each of which corresponds to an amount of a value of the mass airflow, such that sensor signals are captured and values are determined for the mass airflow using a characteristic curve; subjecting a time series of signals, which comprises several signals which have been captured, to a vibration analysis, which determines a fundamental vibration and at least on: prescribed harmonic vibration of the fundamental vibration and compares parameters of the fundamental vibration and the prescribed harmonic vibration; and establishing a backflow against the average mass air- flow, due to pulsations, when the ratio of the parameters of the harmonic vibration to the fundamental vibration exceeds a prescribed threshold value. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (571) 272-2278. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow

*Demetrius Pretlow* 8/16/05

Patent Examiner

*Michael Nghiem*  
MICHAEL NGHIEM  
PRIMARY EXAMINER